

JLCA Forum

Activities of the LCA-Society of Japan (JLCA) and Development Towards the Future

A Focus on a New Project

1 JLCA Activities and Results

JLCA was established in October 1995 with about 250 participating organizations from industrial, government and academic sectors, supported by MITI (the Ministry of International Trade and Industry). The three expert committees and eight working groups of JLCA worked on, and studied the significance, methods, applications, and problems facing LCA in detail, and the report on the results and proposals was officially released in June 1997. At the same time, a policy statement was also released which was based on the recognition that LCA is effective as one of the activities behind the realization of a "sustainable human society", and that cooperation and understanding among general consumers, NGO, industrial sectors and government, is indispensable for these activities.

1.1 Recognition of the status quo, and LCA issues

LCA is considered as a very effective method for establishing a social system able to achieve sustainable development by means of analysis and assessment of environmental impacts throughout the life cycle of products, services and so forth. Recently, the number of enterprises using LCA methods positively in order to develop environment-friendly products, improve production processes and so forth, has been increasing.

On the other hand, the product life cycle generally consists of a complicated combination of many processes and it is difficult to obtain reliable inventory data. Furthermore, LCA includes elements that need not only scientific judgments but also social value judgments. Therefore it is proposed that there are three main problems that must be solved as mentioned below.

- ① **Disunity (uncertainty) based on value judgment**
There is no unified view on integrated assessment among categories as to impact assessment, and allocation (allocating environmental weightings to products, by-products, recycling).
- ② **Insufficient inventory data**
There are some cases where even basic data is lacking or undisclosed although depending on the type of data

and there are other cases where data is unreliable even if it is readily available.

- ③ **No agreement obtained with regard to LCA applications**
LCA has various kinds of applications, but when using them as a tool for comparative assertions, there is no unified view with regard to the scope of applications and operation methods.

1.2 Proposal for LCA popularization

As a result of studies carried out by JLCA, the proposal for LCA popularization in Japan is as follows.

- ① **Establishment of LCA tools for the whole of Japan**
 - Standard procedures for allocation.
 - Standard procedures for integrated assessment.
 - Standard procedures for dealing with crucial variations in inventory data (technical differences, regional differences, etc.).

When establishing the above mentioned LCA tools, it is necessary that scientific grounds should be followed as far as possible.
- ② **Construction of Japanese standard inventory database (public database)**
 - Compilation of bottom-up type data by cooperation with related industries.
 - Establishment of statistical data (including input-output tables) and individual inventory data based on reliable data sources.
- ③ **Development of LCA application tools (methods of use)**
 - Formulation guidelines for LCA applications.
 - Investigation application procedures and evaluation systems for green purchasing, environmental labelling, comparative assertions, etc.
 - Clarification of the position of LCA in comparison with other assessment tools (product assessment, environmental impact assessment, or risk assessment, etc.).
- ④ **Education and popularization systems for citizens, industries, etc.**
 - Auditing of education programs.
 - Training of LCA experts.

2 New development towards establishment of the "LCA Project"

In order to promote items ① ~ ④ above in a positive manner, the most effective method is considered to be the organization of a "LCA Project" which is developed from the present JLCA activities supported by the cooperation of industrial, government and academic sectors.

a cooperative structure among industrial, government and academic sectors, to be the main promoter behind the establishment of an inventory database and to carry out case studies positively using them.

- The role of administration

To support LCA research and development and LCA popularization in Japan with the cooperation of each Ministry and Agency concerned.

- The role of universities, research institutes

To promote LCA research and development (impact assessment, LCA methods, etc.), and LCA enlightenment and popularization.

A diagram of the main themes of the LCA Project is shown in Figure 1.

The budget for the new project in charge of MITI is being assigned to the achievement of the following two major themes among those themes mentioned above.

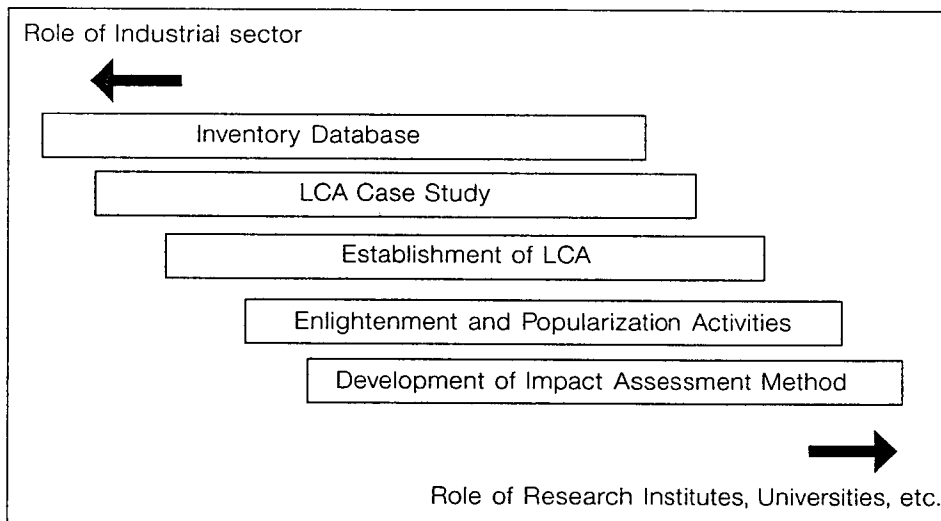


Fig. 1: The main themes of the LCA Project

The role played by each of these sectors is recommended to be as follows:

- The role of the industrial sector

To popularize the way of thinking of LCA, to establish

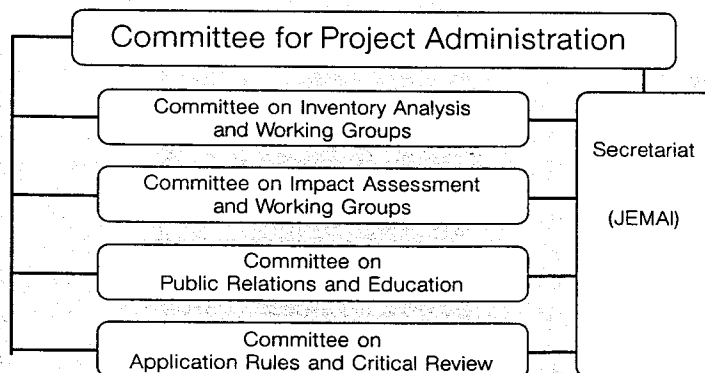
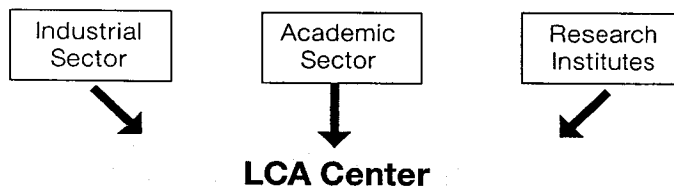


Fig. 2: Organization of the LCA Project (Draft)

① To establish LCA tools for the whole of Japan

- Research and development of impact assessment methods (investigation of current waste data, environmental impact material amount normalization methods etc.).

② To construct a Japanese public database

- Research on common data (resource conservation, transportation, energy).
- Research on data collection from statistical data and input-output tables.
- Research and development on model handling methods of a waste disposal and recycling.

In order to promote the above mentioned project, the cooperative organization among industrial, government and academic sectors as shown in Figure 2 is scheduled to be established, and a secretariat is to be set up in Japan Environmental Management Association for Industry.

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